

NOTES ON THE CYCHRUS FOUND IN THE BLACK MOUNTAINS, NORTH CAROLINA.

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On my expedition to the Black Mountains in western North Carolina from May to the latter part of October, 1912, I was fortunate enough to secure a large number of specimens of the different species of *Cychnus* found in this interesting region. I obtained *Cychnus guyoti*, *æneicollis*, *andrewsi*, *irregularis*, *bicarinatus*, *canadensis*, *elevatus* and form *tenebrosus*. By good luck I located several places inhabited by the rare *C. guyoti* and collected a fine series. It is very local and is found on the extreme summit in the dense, dark, balsam forests, as well as on the slopes and base of the mountains. On the slopes it is only found in the deep ravines and at the base in coves and places where the sun never or rarely penetrates through the dense growth of vegetation. I have never found any *Cychnus* on the slopes where the same becomes parched and dry during the summer, or in sunny places. There are two forms of *guyoti*, a purplish bronze form (the type) and a black form wanting the purplish metallic luster. For this dark form I would propose the name *angelli*, after Mr. G. W. J. Angell, who is specializing in the *Cychnini*. *Guyoti* is found from the latter part of May until late in August, but is most abundant in June and July. It evidently does not hibernate, as I have not been able to take it after August 20. *Cychnus æneicollis* is found in the same situations as *guyoti*, but is more abundant and social in habit and is most numerous on the extreme summit in the balsams (*Abies frazeri*). It is a valid species and not a form of *andrewsi* as placed by Roeschke in his monograph. There are also two forms of *æneicollis*, a metallic greenish and a purple form. I herewith propose to call the green form *æneicollis* (type form) and the purple form *purpuratus*. *Cychnus andrewsi* is the most common species and is found in mostly all the coves at the base of the mountains near streams. I have never taken it on all my trips on the extreme summit or higher parts of the slopes. It is found throughout the year and

it hibernates in rotten wood and hollow trees. I have taken as many as twenty-five under bark of a single tree and on one day took as many as one hundred specimens. *Cychrus irregularis* is rare and I collected only twenty-five examples in the coves near the base of the mountains in June, July and August. I have also taken it on the summit. *Cychrus bicarinatus* is almost as common as *andrewsi* and probably also hibernates. It is found from June to late in October and is most abundant in September and October. *C. canadensis* is not common. This species prefers places close to the ground under chips of wood and under bark of small fallen trees. It is found from the base to the summit of the mountains and is most abundant in the balsams, with *æneicollis*. I collected one female of *canadensis* in the Swananoa Mountains, N. C., which differs in color from the purple Black Mountain form by being almost black with only slight traces of the purple color, and it is very likely that an entirely black form will be found when this region is explored. *Cychrus elevatus* form *tenebrosus* I obtained in open woods on the edges of the slopes and in the valley from June to October. I am fully convinced that other new forms of *Cychrus* will be found in the mountains and peaks in western North Carolina, Georgia and eastern Tennessee, especially in the Great Smoky Mountains, which have never been explored entomologically. All *Cychrus* feed on snails, which abound in the region and may be collected by the thousands. I have also found *C. andrewsi* feeding on catbriar (*Smilax*) berries which in some way got under loose bark of a fallen tree. I found almost all of my *Cychrus* under loose bark and only a few under stones.

STUDIES IN THE OLD TESTAMENT.

By R. P. Dow, Brooklyn, N. Y.

LESSER INSECT MENTIONS.

After considering the many grasshoppers, locusts, flies, wasps, bees mentioned in the Old Testament, little text is left for the remaining dozen insects of somewhat lesser economic importance. Of the identification of the *nemalah* with the ant there can be no